

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently amended) A method of internally cleaning a coil pipe of a heat exchanger, said heat exchanger including an outlet and an inlet providing fluid communication with said coil pipe, said method comprising:
 - (1) flushing said coil pipe in a first flow direction by:

connecting a first end of a suction hose to said heat exchanger inlet;
connecting a second end of said suction hose to a suction pump and a waste-and-wash water collecting tank; and
connecting one end of an ice-feeding hose to said heat exchanger outlet and a second end of said ice-feeding hose to a hopper;
supplying an ice and water mixture into said hopper;
engaging said suction pump so that the ice and water are suctioned into said coil pipe outlet, pass internally through said coil pipe in a reverse flow direction towards said inlet, exit said inlet, and collect in said waste-and-wash water collecting tank;
 - (2) flushing said coil pipe in a second flow direction by:

connecting said first end of said suction hose to said heat exchanger outlet;

connecting said second end of said suction hose to said suction pump and said waste-and-wash water collecting tank; and connecting said one end of said ice-feeding hose to said heat exchanger inlet and said second end of said ice-feeding hose to said hopper; supplying said ice and water mixture into said hopper; engaging said suction pump so that the ice and water are suctioned into said coil pipe inlet, pass internally through said coil pipe in a normal flow direction towards said outlet, exit said outlet, and collect in said waste-and-wash water collecting tank; and

(3) alternately flushing said coil pipe in said first and second flow directions for cleaning said coil pipe.

2-5. (Canceled)

6. (Currently amended) A method of internally cleaning a copper coil pipe of a heat exchanger, said heat exchanger including an outlet and an inlet providing fluid communication with said coil pipe, said method comprising:

(1) flushing said coil pipe in a first flow direction by:

connecting a first end of a suction hose to said heat exchanger inlet; providing a carriage and disposing a suction pump and a waste-and-wash water collector tank on said carriage;

connecting a second end of said suction hose to said suction pump and said waste-and-wash water collecting tank; and

connecting one end of an ice-feeding hose to said heat exchanger outlet and a second end of said ice-feeding hose to a hopper;

supplying an ice and water mixture into said hopper;

engaging said suction pump so that the ice and water are suctioned into said coil pipe outlet, pass internally through said coil pipe in a reverse flow direction towards said inlet, exit said inlet, and collect in said waste-and-wash water collecting tank;

(2) flushing said coil pipe in a second flow direction by:

connecting said first end of said suction hose to said heat exchanger outlet;

connecting said second end of said suction hose to said suction pump and said waste-and-wash water collecting tank; and

connecting said one end of said ice-feeding hose to said heat exchanger inlet and said second end of said ice-feeding hose to said hopper;

supplying said ice and water mixture into said hopper;

engaging said suction pump so that the ice and water are suctioned into said coil pipe inlet, pass internally through said coil pipe in said a normal flow direction towards said outlet, exit said outlet, and collect in said waste-and-wash water collecting tank; and

(3) alternately flushing said coil pipe in said first and second flow directions; whereby impact energy of said ice cubes and force from said water through said coil pipe and suction hose into said waste-and-wash water collecting tank clean said coil pipe.

7. (Previously Presented) The method according to claim 1, further comprising providing a transparent portion in said ice feeding hose for enabling visual inspection the flow of waste-and-wash water therethrough.

8. (Previously Presented) The method according to claim 6, further comprising providing a transparent portion in said ice feeding hose for enabling visual inspection the flow of waste-and-wash water therethrough.

9. (Previously Presented) The method according to claim 1, wherein the ice and water are mixed in ratio of 1 (ice) to 4~6 (water).

10. (Previously Presented) The method according to claim 6, wherein the ice and water are mixed in ratio of 1 (ice) to 4~6 (water).

11. (Previously Presented) The method according to claim 1, wherein the ice is prepared in the form of a cube having a side length of about 1/3-2/3 of an inside diameter of said heat exchanger coil pipe.

12. (Previously Presented) The method according to claim 6, wherein the ice is prepared in the form of a cube having a side length of about 1/3-2/3 of an inside diameter of said heat exchanger coil pipe.

13. (Currently amended) A method of internally cleaning a heat exchanger having at least two coil pipes interconnecting ~~an inlet a first~~ header and ~~an outlet a second~~ header, said method comprising:

supplying an ice and water mixture into a hopper;

connecting said hopper to a one of said ~~inlet first~~ header and said ~~outlet second~~ header; and

causing said ice and water mixture to be suctioned into said one of said first header and said second header and to simultaneously pass internally through said at least two coil pipes by applying suction to a remaining one of said inlet first header and said outlet second header so that the ice and water mixture is suctioned into said one of said inlet header and said outlet header, and simultaneously pass internally through said at least two coil pipes.

14. (Currently amended) The method according to claim 13, wherein said one of said ~~heat exchanger inlet~~ first header and said ~~outlet~~ second header is [[said]] an inlet header, and said remaining one of said ~~inlet~~ first header and said ~~outlet~~ second header is [[said]] an outlet header.

15. (Currently amended) The method according to claim 14, further comprising repeating said method wherein said one of said heat exchanger ~~inlet~~ first header and said ~~outlet~~ second header is said outlet header and said remaining one of said inlet header and said outlet header is said inlet header.

16. (Currently amended) The method according to claim 15, further comprising repeating said method wherein said one of said ~~heat exchanger inlet~~ first header and said ~~outlet~~ second header alternates between being one of said inlet header and said outlet header and said remaining one of said ~~inlet~~ first header and said ~~outlet~~ second header is alternately switched alternates between being a respective remaining one of said inlet header and said outlet header, respectively.

17. (Previously Presented) The method according to claim 15, wherein said coil pipes are non-corrugated.